

**CLASSIFYING TACHYARRHYTHMIA USING TIME INTERVAL  
BETWEEN VENTRICULAR DEPOLARIZATION  
AND MITRAL VALVE CLOSURE**

**Abstract**

5           A cardiac rhythm management system measures a time interval between a  
first fiducial marker indicative of a ventricular depolarization (e.g., a Q-wave, an R-  
wave, etc.) and a second fiducial marker indicative of a subsequent mitral valve  
closure (MVC) occurring during the same cardiac cycle. Such time intervals are  
used for detecting atrioventricular (AV) dissociation. The AV dissociation may, in  
10   turn, be used for discriminating between a supraventricular tachyarrhythmia (SVT)  
and a ventricular tachyarrhythmia (VT) or for any other diagnostic or therapeutic  
purpose. The AV dissociation and/or SVT/VT discrimination information may be  
communicated from an implantable cardiac rhythm management device to an  
external interface and/or used to determine the nature of therapy delivered to the  
15   subject. In a further example, amplitudes indicative of the MVCs are also used for  
determining whether AV dissociation exists.